

**REMARKS**

Claims 1-3, 5, 7, 11-13, 15-17, and 19-24 are pending in this application. Claims 5, 12, and 19-22 are withdrawn from consideration. Claims 1-3, 7, 11, 13, 15-17, 23, and 24 were rejected under 35 U.S.C. § 112, first paragraph. Claims 1-3, 7, 11, 13, 15-17, 23, and 24 were rejected under 35 U.S.C. § 103.

By this amendment, claims 1, 3, and 15 have been amended without prejudice or disclaimer of any previously claimed subject matter. Support for the amendment can be found, *inter alia*, throughout the specification, for example, at page 2, lines 25-27, in original claim 3, and in pending claims 3 and 15. As amended, claim 1 incorporates a limitation of pending claim 3. Accordingly, the amendment does not add any new matter or raise any new issues. Applicants respectfully request entry of this amendment.

The amendments are made solely to promote prosecution without prejudice or disclaimer of any previously claimed subject matter. With respect to all amendments and cancelled claims, Applicants have not dedicated or abandoned any unclaimed subject matter and moreover have not acquiesced to any rejections and/or objections made by the Patent Office. Applicants expressly reserve the right to pursue prosecution of any presently excluded subject matter or claim embodiments in one or more future continuation and/or divisional application(s).

Applicants have carefully considered the points raised in the Office Action and believe that the Examiner's concerns have been addressed as described herein, thereby placing this case into condition for allowance.

**Rejection under 35 U.S.C. §112, first paragraph**

Claims 1-3, 7, 11, 13, 15-17, 23, and 24 were rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection.

The Office has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. For a *prima facie* case, the Office is required to provide reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed. M.P.E.P. §2163.04.

In support of the rejection, the Examiner merely states that "Applicant is relying on 2 portions of the specification for basis for this language; however, neither portion of the specification provides any basis for the mixture being free of dinol." Office Action, page 2. Applicants disagree with this characterization of the specification. Applicants respectfully submit that this statement does not provide a reasonable basis to challenge the adequacy of the written description and the Examiner has not established a *prima facie* case for lack of written description.

This notwithstanding, Applicants respectfully submit that the specification complies with the written description requirement for the claimed invention.

To meet the written description requirement, the "specification as originally filed must convey clearly to those skilled in the art the information that the applicant has invented the specific subject matter later claimed. When the original specification accomplishes that, regardless of *how* it accomplishes it, the essential goal of the description requirement is realized." *In re Wright* (9 USPQ2d 1649 (1989)) citing *In re Ruschig* (154 USPQ 118 (CCPA 1967)), original emphasis. The Federal Circuit in *In re Kaslow* (217 USPQ 1089 (1983)) and the CCPA in *In re Wright* (145 USPQ 182 (1965)) have held that a claim amendment need not find *in haec verba* support in the specification.

The Office asserts that the phrase "free of dinol" used to describe the claimed ignition mixture lacks support in the specification. Applicants submit that one of ordinary skill would understand that the claimed ignition mixture is "dinol-free" upon reading the specification.

The specification describes that a basic problem with ignition mixtures based on dinol as the primary explosive is that dinol "is a carcinogenic compound with very unpleasant physiological

effects.” Specification page 1, lines 22-23. The specification then outlines “attempts to avoid dinol completely” at page 1, line 23, to page 2, line 15. In the “Disclosure of the Invention” section, Applicants state that the drawback of ignition mixtures described in the “Background Art” section “are solved and totally removed by a non-toxic and non-corrosive ignition mixture the essence of which lies in that the energy system, the primary explosive of the dinol type is replaced by a high explosive.” Specification, page 2, lines 17-23, emphasis added. The specification then describes various nitroester and nitramine high explosives for use in the invention. Such disclosure clearly indicates that an ignition mixture without dinol is the object of the invention.

In addition, the specification and claims clearly indicate that the claimed invention is a “non-toxic” ignition mixture. Thus, dinol is excluded from the claimed ignition mixture since it is a carcinogenic compound.

Accordingly, Applicants respectfully submit that the specification describes distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. Thus, the pending claims fall within the subject matter that is described by the specification.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, first paragraph.

#### Rejection under 35 U.S.C. §103

Claims 1-3, 7, 11, 13, 15-17, 23, and 24 were rejected under 35 U.S.C. §103 as allegedly unpatentable over German Patent DE-19540278 to Hagel, *et al.* (“Hagel”). Applicants respectfully traverse this rejection.

A *prima facie* case of obviousness requires that three basic criteria must be met. First, there must be some suggestion or motivation, either in Hagel or in the knowledge generally available to one of ordinary skill in the art, to modify Hagel. Second, there must be a reasonable expectation of success. Finally, Hagel must teach or suggest all the claim limitations. The teaching

or suggestion for the reasonable expectation of success must be found in Hagel, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20USPQ2d 1438 (Fed. Cir. 1991); MPEP §2143. If any one of these three criteria is not met, a *prima facie* case of obviousness has not been established.

The invention is directed to a novel combination of compounds which form a non-toxic and non-corrosive ignition mixture. As amended herein, the claimed ignition mixture includes amorphous boron as a fuel. As described in the specification and herein, the essence of the claimed non-toxic and non-corrosive ignition mixture is that dinol is replaced as an explosive by a nitroester or nitramine explosive.

Hagel describes lead- and barium-free ignition mixtures. Among the explosives listed by Hagel as suitable for use in the mixtures is diazodinitrophenol, also known as dinol.<sup>1</sup> See, for example, Hagel, U.S. Pat. Application Pub. No. 20010001970, paragraph 0008, for the recitation in English. This is in clear contrast to the instant claimed composition which does not comprise dinol.

Hagel also describes the possible use of boron powder as a reducing agent and of boron nitride as an inert substance in the mixture.<sup>2</sup> Hagel does not teach or suggest the use of amorphous boron in an ignition mixture.

Since this is an obviousness rejection and not an anticipation rejection, the Office indicates that Hagel does not teach all of the claim limitations. In addition, given the inclusion of diazodinitrophenol as an acceptable component of Hagel's ignition mixtures, Hagel does not suggest all of the claim limitations.

Further, although Example 1 of Hagel does not contain dinol, as noted by the Examiner,<sup>3</sup> there is no suggestion or motivation in Hagel to modify the teachings therein to arrive at the claimed invention, a dinol-free ignition mixture. In fact, taken in its entirety, Hagel teaches away from the claimed invention. Nor does Hagel provide any suggestion or motivation for the use of amorphous

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<sup>1</sup> Diazodinitrophenol is also known as dinol or DDNP as noted, for example, in Mei *et al.*, U.S. Pat. No. 5,167,736, at column 1, lines 16-17, of record.

<sup>2</sup> Hagel, U.S. Pat. Application Pub. No. 20010001970, paragraphs 0013 and 0015.

boron as a fuel in the ignition mixture. Thus, Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103.

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<sup>3</sup> Office Action, page 3.

**CONCLUSION**

Applicants believe that all issues raised in the Office Action have been properly addressed in this response. Accordingly, reconsideration and allowance of the pending claims is respectfully requested. If the Examiner feels that a telephone interview would serve to facilitate resolution of any outstanding issues, the Examiner is encouraged to contact Applicants' representative at the telephone number below.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 321402000200.

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